
The psychiatry of HIV infection

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In 1981 the condition that was later to be known as the acquired immune deficiency syndrome (AIDS) was described, and in 1983 its causative agent, the human immunodeficiency virus 1 (HIV-1), was isolated. The past 15 years have led to a growing awareness of the global nature of the epidemic and, in parallel with it, to the recognition of its medical, socioeconomic and psychological consequences. In the UK, almost 12 000 AIDS cases have been reported since 1982, and more than 25 000 cases of HIV-1 infection have been identified since 1984. Most cases of AIDS and HIV-1 have been in the Thames Regions, and it is expected that this geographical pattern will continue until the end of the decade.

A remarkable feature of the HIV epidemic has been the way in which the psychological, behavioural and social aspects of the infection have been recognised, whether in relation to the prevention of its spread or to the mental health consequences of the condition. Although awareness of the psychological and social aspects of medical disorders is not new, HIV infection has provided a striking example of the practice of a holistic approach to the care and prevention of an infectious disease.

Mental disorders in HIV infection

The mental disorders seen in people with HIV infection are similar to those that occur in individuals suffering from other potentially fatal conditions that have an unpredictable course, and they include a range of normal psychological reactions (such as shock, denial and distress), as well as abnormal responses (such as suicidal

behaviour and major depression). However, there are differences in comparison with other disorders, due to some specific features of HIV infection. First, brain-related complications of HIV can give rise to neuropsychiatric syndromes, including dementia; second, a substantial proportion of individuals with HIV infection are at increased risk of developing mental health problems, as is shown by the frequent presence of a history of psychological and social difficulties prior to acquiring HIV; finally, the social stigma associated with HIV and AIDS often adds to the problems faced by those trying to adjust to the physical consequences of the condition.

Factors associated with the development of mental disorders in HIV infection

In spite of the considerable health and social problems faced by people with HIV infection, many are able to make use of internal and external resources to find effective ways of coping. A substantial proportion, however, is less successful and experiences moderate to severe mental health problems. Identification of factors associated with the development of significant psychiatric morbidity should help in recognising those at risk and in providing effective interventions. Such factors include, among others, HIV disease-related aspects, coping and social supports, and demographic characteristics (Box 1).

HIV-related factors

Psychological problems are more likely to occur at two stages: after notification of a positive HIV test result, and when symptomatic disease develops, usually involving an AIDS diagnosis. The under-

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Box 1. Factors associated with development of mental disorders in people with HIV infection

HIV-related factors – notification of HIV infection, decline in health, AIDS diagnosis, disfiguring or disabling symptoms
 History of psychiatric problems
 Lack of social supports
 Avoidance and denial as a habitual way of coping
 Exposure to grief due to AIDS, and other adverse life events
 Personal characteristics: older age, reduced 'brain reserve', ethnicity and gender, historical/current injecting drug use

standable distress that follows an HIV-positive diagnosis can be magnified by the way in which the news is broken, by the circumstances in which the test is carried out, and by the nature of the support available (Ostrow *et al*, 1989; Pergami *et al*, 1994a,b), but it is in symptomatic disease that severe mental disorders are more likely to develop. Shortness of breath, weight loss and severe diarrhoea will all affect quality of life and mood. More specific problems such as blindness or the presence of disfiguring conditions such as facial Kaposi's sarcoma can occur, with obvious psychological consequences. Loss of hope may follow the development of AIDS, in particular after a long period without symptoms of disease progression (for review see Catalan *et al*, 1995). Neuropsychiatric syndromes such as HIV-associated dementia are also more common in advanced symptomatic disease (see below).

Past psychiatric history

A history of psychiatric in-patient or out-patient care before acquiring HIV infection increases the risk of psychiatric morbidity, as shown in studies involving gay men (Catalan *et al*, 1992a) and men with haemophilia (Dew *et al*, 1990; Catalan *et al*, 1992b). The presence of personality disorder, whether or not this is associated with a formal past psychiatric history, also increases the risk of psychological problems after HIV infection (Johnson *et al*, 1995).

Social supports

As in other areas in mental health, the presence of good social supports and confiding relationships is associated with a lower prevalence of psychological

morbidity in people with HIV infection, as shown in cross-sectional and prospective studies (Nott *et al*, 1995).

Coping style

Cross-sectional studies have shown that psychological morbidity in people with HIV is associated with the use of avoidance (Kurdek & Siesky, 1990); mental and behavioural disengagement (Catalan *et al*, 1995); and with helplessness, denial and decreased use of a fighting spirit (Leserman *et al*, 1992). Although there are methodological problems in cross-sectional studies of this kind, it is generally accepted that success in dealing with adversity is influenced by long-standing personality traits and coping style, among other factors.

Life events and exposure to grief due to AIDS

Life events, in particular adverse ones, can contribute to psychological morbidity in HIV. Exposure to repeated losses due to HIV is a characteristic adverse effect faced by many individuals with HIV infection, and has been shown to be associated with greater psychological morbidity, in particular depression (Viney *et al*, 1992; Sherr *et al*, 1992).

Personal and demographic characteristics

Older age is associated with a greater risk of HIV-associated dementia, and it has been suggested that the extremes of age experience greater difficulties in coping with HIV. 'Brain reserve', reflecting premorbid IQ and educational attainments, has been found to correlate with the risk of developing HIV-related cognitive impairment (Stern *et al*, 1996). Female gender can be associated with a greater risk of psychological difficulties (Catalan & Riccio, 1990), although social and economic factors are likely to be important. Ethnicity has been implicated in contributing to psychological morbidity in US studies (Ceballos-Capitaine *et al*, 1990), with non-Whites (Blacks and Hispanics) showing worse adjustment, probably related to social and cultural factors. Regarding transmission categories, injecting drug users have been found to have greater psychological morbidity than other groups (Gala *et al*, 1993).

Nature of mental disorders in people infected or affected by HIV

People with HIV infection can develop a wide range of mental disorders, as can their partners and relatives and those who regard themselves as being at risk of infection (Box 2).

Box 2. Types of mental disorders in people infected or affected by HIV infection

Abnormal psychological reactions – adjustment disorders, manifestations of personality disorder

Mood and other disorders – major depression and other depressive syndromes, suicidal behaviour, manic episodes, sexual dysfunction, anxiety disorders, obsessive-compulsive disorder, eating disorders, association with child sexual abuse

Organic brain syndromes – acute and sub-acute brain syndromes, HIV-associated dementia, HIV-associated minor cognitive impairment

Mental disorders in partners and relatives of people with HIV

Abnormal beliefs in people seeking testing for HIV

Abnormal psychological reactions

Symptoms of anxiety, insomnia and depression, as well as social impairment, are common in response to the discovery of HIV infection or the development of complications. In many instances these symptoms are mild and self-limited, but they can be severe and disabling for some. Adjustment disorder is one of the most common diagnoses in people referred to mental health services – about 30% in some reports. Personality disorder is often an associated diagnosis, usually including avoidant, dependent, narcissistic or histrionic features, and sometimes made worse by substance misuse.

Mood and other disorders

Requests for assessment of depressed mood and/or suicidal ideas are common among people with HIV referred to mental health specialists. Severe depression has been reported in about 15% of referrals. Suicidal ideas are common in people with HIV, and there is a risk of both deliberate self-harm and suicide, although there is some debate about the true extent to which the risk of suicide is increased in HIV (Marzuk & Perry, 1993).

The risk of manic episodes seems to be increased in HIV, mania being the most frequent reason for psychiatric hospitalisation among people with HIV. In some cases, illicit drug use or iatrogenic causes are implicated, as can be the chance association of HIV infection and bipolar affective disorder, but in the majority of cases no obvious aetiological

factors are identified. Most cases of new-onset mania occur in advanced HIV disease and they are often associated with the presence of substantial cognitive impairment. New-onset mania in severe symptomatic disease is predictive of reduced survival (Catalan *et al*, 1995).

Sexual dysfunction is common in HIV, organic and iatrogenic factors being important in advanced disease stages. Anxiety disorders, including phobias and panic attacks, and obsessive-compulsive disorders are occasionally seen. Eating disorders can complicate the management of HIV, and there are disturbing reports of rape and child sexual abuse leading to HIV infection (Gellert *et al*, 1993).

Organic brain syndromes

Neuropsychiatric syndromes are common in HIV infection. Immune suppression can lead to a variety of secondary complications affecting the brain, including opportunistic infections such as cerebral toxoplasmosis and progressive multifocal leucoencephalopathy, and tumours such as cerebral lymphoma. Acute and sub-acute syndromes (delirium) often occur as a result of systemic disorder and secondary infections. However, even in the absence of secondary complications, HIV infection can be associated with adverse effects on brain function. Primary HIV-related brain disorders include HIV-associated dementia and minor cognitive disorder.

HIV-associated dementia is characterised by substantial memory and intellectual decline, with often marked psychomotor slowing, and the possible presence of motor abnormalities, in the absence of delirium or secondary HIV-related disorders. There has been some debate about the terminology and clinical features of HIV-associated dementia, with three main nomenclatures in use: HIV-1-associated dementia, in the terminology of the World Health Organization; AIDS dementia complex (ADC; Navia *et al*, 1986a,b); and HIV-1 associated dementia complex (American Academy of Neurology AIDS Task Force; for review see Catalan *et al*, 1995).

It is only recently that the prevalence of HIV-associated dementia has become clearer. Early reports suggested that as many as one-third of individuals suffered dementia by the time they developed AIDS, and two-thirds by the time they died, but more recent reports suggest a prevalence of up to 15% in advanced disease (McArthur *et al*, 1993; Majet *et al*, 1994a,b; Chiesi *et al*, 1996). Dementia tends to develop over a relatively short period of time, and once present it is associated with poor prognosis. As a rule, dementia is a syndrome of the final year of life, although on occasion it can

develop earlier. Research into predictors of dementia suggests that older age, presence of psychomotor slowing, low body mass index and constitutional symptoms of HIV are related to increased risk. There is some evidence that zidovudine (AZT) may have a neuroprotective effect and may thus be associated with a reduced risk of developing HIV-associated dementia (Portegies *et al*, 1989; Baldeweg *et al*, 1995a,b).

Neuropathologically, encephalitis (with macrophages, microglia and multinucleated giant cells), diffuse myelin damage, reactive astrocytosis, microglial activation and neuronal loss are found, although these abnormalities do not necessarily correlate with the degree of cognitive impairment. The mechanisms involved in the development of cognitive impairment are unclear, but both viral and cytokine activity are thought to be implicated (Everall, 1995).

HIV-associated minor cognitive disorder develops mostly in symptomatics, whether or not they have a diagnosis of AIDS, and there is a good deal of debate about the possible presence of minor cognitive disorder in HIV asymptomatics. Poorer memory and attention, slower information processing and difficulty with abstract thinking have been found in non-demented HIV symptomatics, and while 5% of newly diagnosed AIDS cases have been found to be impaired, the proportion increases to 60% in late AIDS (Tross *et al*, 1988). The evidence for the presence of minor cognitive disorder in HIV asymptomatics is less clear. After the report by Grant *et al* (1987) in which 44% of a small sample showed impairment, there have been many reports involving asymptomatics from different transmission groups. At present the consensus view is that, as a group, asymptomatics do not show evidence of clinically relevant cognitive disorder, even if some perform worse than expected on some neuropsychological tests (for discussion see Newman *et al*, 1995).

Mental disorders of partners and relatives of people with HIV

Partners of infected individuals need to adapt to their changing relationship, with increased dependency and decline in health. Although many couples successfully cope with the challenge, others may experience major difficulties and the reawakening of unresolved problems. Fear of infection and concerns about sexual contact, and contraception and fertility in heterosexuals, may compound the difficulties. Anxiety and depression are common in partners of infected individuals, and the problems may be worse when both partners are infected. Similar findings apply to relatives and

other care-givers. The HIV-infected individual's own level of psychological distress is an important risk factor for relatives, together with the degree of physical disease and social supports. The problems of children infected or affected by HIV (uninfected children of HIV-infected parents or siblings) is a growing area of concern (Sherr, 1991).

Abnormal beliefs in people seeking testing for HIV

Some individuals who have undergone HIV testing with negative results remain concerned about the possibility of being infected, or have the conviction that they are seropositive. The usual reassurance and explanation are not sufficient to put their minds at rest, and they may seek testing repeatedly, with little change in their anxiety or beliefs. Unhelpful labels such as 'the worried well' can make it harder to assess what is in itself a symptom rather than a diagnosis. Abnormal beliefs of this kind may reflect inadequate information and mistaken attitudes, neurotic disorders (obsessional disorder, somatisation or hypochondriasis), or may be delusional in nature, as in major depression or schizophrenia.

Management of mental disorders in HIV infection

Specialist mental health teams deal with only a proportion of those people with HIV infection experiencing mental disorders, the large majority being supported by general physicians and nurses, and by social workers and others (health advisers and counsellors) with expertise in counselling individuals with psychosocial problems. Close collaboration with other professionals in statutory services, and with volunteers and others in the independent sectors, is essential if those who are experiencing HIV-related problems are to be helped effectively.

Assessment of mental health problems

The first stage in the management of mental disorders in the physically ill is the recognition of their presence by those involved in their care, mostly general doctors and nurses. There is a risk that psychological symptoms might be seen only as a manifestation of the main physical disorder, or as a normal and understandable reaction to shortened life expectancy. Negative attitudes to

psychiatry and limited access to specialist help could also influence the ability of primary-care and hospital staff to recognise mental disorders in their patients.

Assessment of symptoms of mental disorder will require evaluating the contribution of physical disease and its symptoms, as well as the possible role of side-effects of medication and other treatments for the principal physical disorder.

Treatment of mental disorders in HIV infection

A variety of interventions ranging from psychological to residential care approaches can be used in HIV infection, usually in combination (Box 3).

Psychological interventions

At the time of seeking HIV testing, many are anxious and concerned about the possible result. It is important to ensure that individuals receive appropriate pre-test counselling about the significance of the procedure, and post-test counselling about its outcome, as well as risk-reduction counselling, regardless of the HIV test result. Such procedures are usually carried out by trained professionals (health advisers and HIV counsellors), specialist mental health workers being involved only in cases in which there is concern about the mental state of the person undergoing testing or about their response to notification of the test results.

Psychological interventions for HIV-seropositive individuals experiencing mental health problems

will need to be tailored to the specific problems and circumstances faced by the person. Psycho-educational interventions (Perry, 1993), cognitive-behavioural therapy (Kelly *et al*, 1993) and interpersonal psychotherapy (Markowitz *et al*, 1994) have been shown to be of value. More specific interventions have been described for the breaking of bad news, discussion of declining laboratory tests, the significance of cognitive impairment, illicit drug use, palliative care issues and interventions for couples and families.

Pharmacological interventions

As in the treatment of people with other severe physical disorders, it is important to select drugs with few side-effects, so as not to add to the discomfort caused by physical symptoms. In addition, problems with absorption and metabolism in the physically ill suggest careful monitoring of drug dosages.

There is good evidence for the efficacy of antidepressants in HIV, including SSRIs, which are well tolerated. Sedatives and tranquillisers are used symptomatically in acute and chronic brain syndromes and in mania. High-potency neuroleptics such as haloperidol have been found to be effective in people with HIV (Breitbart *et al*, 1996), although there is concern about patients' sensitivity to extrapyramidal side-effects. The new atypical antipsychotics seem to be well tolerated and effective.

HIV-associated dementia responds to treatment with the antiretroviral AZT (Sidtis *et al*, 1993), although benefits are present for only a limited period of time. There is evidence to suggest that AZT may also be effective in the prevention of HIV-associated dementia and related disorders (see above).

Psychiatric hospitalisation and other residential care

A proportion of people with HIV infection will require psychiatric in-patient care, usually those suffering from severe disorders such as major depression, mania or severe behavioural problems resulting from brain disorders or premorbid personality difficulties. Treatment will focus on the specific disorder and problems, but admission to hospital may require staff awareness and education about such issues as confidentiality and HIV infection, attitudes to patients with HIV, and infection control and risk reduction guidelines. Close collaboration with the medical team looking after the patient will be essential.

Non-psychiatric residential care may include the use of respite and palliative care centres, and

Box 3. Management of mental disorders in people with HIV infection

Psychological interventions

At the time of testing – support for medical and nursing staff

HIV seropositives – cognitive-behavioural interventions, psychoeducational techniques, support, interpersonal psychotherapy, and other specific interventions

Psychopharmacological interventions – drugs with low side-effect profiles for depression, mania and acute brain syndromes; zidovudine for HIV-associated cognitive disorders

Psychiatric hospitalisation and respite/hospice care

Community organisations and peer support

services for injecting drug users. Good liaison between the mental health team and residential centre staff will be desirable.

Community organisations and peer supports

There are many organisations providing care and support for people with HIV and their carers, ranging from practical help to specialised counselling and psychotherapy. Mental health teams dealing with HIV-related problems should be aware of the local community organisations and the services they provide.

Psychological interventions to reduce the risk of infection

Treatments against HIV and its complications are of only limited efficacy. Interventions designed to prevent the transmission of HIV by altering the frequency of risk behaviours, such as sexual and injecting drug-use behaviours, are thus of great importance. Risk behaviours, however, are difficult to alter, being reinforced by the pleasure they lead to in the short term, and being influenced by social, economic and political factors. Factors associated with unsafe sexual and drug-using behaviour include: knowledge about HIV and risk perception; attitudes to condom use; emotional state and psychological distress and problems; involvement in treatment programmes for substance misuse; demographic characteristics; prison experience; alcohol and substance misuse; type of relationship; perceived social norms; and intrapersonal factors.

Although it would be unrealistic to expect that psychological and behavioural interventions would be effective in influencing all or some of the factors listed above, there is some evidence of their value (Catalan *et al*, 1995; Oakley *et al*, 1995), and there are interesting developments using cognitive-behavioural interventions for individuals experiencing difficulties in altering their risk behaviour (Tallis, 1995).

Practical problems for psychiatrists

There is evidence from the USA and from continental Europe suggesting that psychiatric populations may be at increased risk of HIV infection. A recent

review of anonymised HIV seroprevalence studies reported a prevalence of up to 8.9% among patients admitted to psychiatric units, only a minority of seropositive patients being identified by staff (Stefan & Catalan, 1995). There are no published UK studies and, although it could be argued that a significant prevalence would be expected only in metropolitan areas with a known high prevalence of HIV infection, it is also likely that psychiatrists will from time to time be asked to deal with HIV-seropositive patients, or to make decisions about patients who may be thought to be at risk of infection (Box 4).

Recognising the possibility of HIV-associated psychiatric disorder

Eliciting a history of exposure to (sexual and drug-injecting) behaviours with risk of HIV infection would be the first step. The psychiatric syndrome itself may not be diagnostic, although a syndrome of dementia or cognitive impairment in a young adult may give concern. The presence of physical symptoms suggestive of immune deficiency can occasionally assist. The patient's characteristics may help, although it is important to remember that only a minority of, say, gay men, injecting drug users or men with haemophilia are HIV positive.

What to do if it is probable that a patient has HIV infection

Would knowledge of the person's HIV status affect psychiatric assessment and treatment? Would it be in the patient's interest to know their HIV status? The reasons why the patient is seeking psychiatric help may not be relevant to the possibility of HIV

Box 4. Practical problems for psychiatrists

How can the possibility of HIV-associated psychiatric disorder be recognised?

What is to be done if it is probable that a patient has HIV infection?

If it is desirable to know the patient's HIV status, how should the psychiatrist proceed?

How should patients be managed if they refuse HIV testing?

Can psychiatric patients be tested without consent?

How should the known HIV-positive patient be managed?

infection, and it would be important to be clear about the motives for wanting to know the patient's status.

If it is desirable to know the patient's HIV status, how should the psychiatrist proceed?

The official guidelines given by the General Medical Council and Royal College of Psychiatrists in the UK, and the American Psychiatric Association in the USA, stress the need for HIV testing to require the patient's consent, usually involving pre-test counselling about the significance and implications of the results. Mental health workers not familiar with the procedures are advised to involve the local genito-urinary physicians and health advisers at this point.

How should patients be managed if they refuse HIV testing?

All patients and staff should be regarded as potentially able to acquire and transmit HIV infection. Therefore, universal precautions concerning bodily fluids and spillages should be followed as a routine, regardless of whether or not their HIV status is known. In some cases the question will arise as to whether to test without the patient's consent.

Can patients be tested without their consent?

Testing without the patient's explicit consent would be justified only in very rare cases. In psychiatric practice the question may arise when a patient with a psychiatric disorder is unwilling (i.e. in severe mania) or unable (i.e. severe cognitive impairment) to give consent. In such cases it would be essential to establish to what extent the patient's immediate psychiatric treatment would be influenced by knowledge of their HIV status, the degree to which testing would be in the patient's interest, and whether or not it would make any difference to the safety of staff or others. A decision to test without consent is a difficult one, and it should involve discussion with a physician with experience in the care of patients with HIV. Needless to say, careful documentation of the decision-making process is essential (Catalan, 1990).

Managing known HIV-positive patients with mental disorders

It goes without saying that people with HIV infection are entitled to the same high standard of care as any other patients, and this may in some cases require training and support to deal with unrealistic fears and negative attitudes among staff. Confidentiality is of paramount importance in

relation to HIV infection. As regards infection control, no special measures need to be taken when looking after patients with HIV infection beyond the universal precautions that should be used in all cases.

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Multiple choice questions

- The following have been found to be associated with increased risk of psychiatric morbidity in people with HIV infection:
 - diagnosis of AIDS
 - a past psychiatric history
 - a past family psychiatric history
 - lack of social supports
 - being gay.
- HIV-associated dementia:
 - affects a majority of AIDS patients
 - can occur in HIV asymptomatics
 - affects a minority of AIDS patients
 - responds to zidovudine treatment
 - cannot be distinguished from depression in AIDS patients.
- Testing psychiatric patients for HIV infection:
 - should be done with their consent
 - is always necessary when the possibility of the patient being HIV positive arises
 - is desirable when the results are likely to influence choice of treatment
 - is necessary to protect staff
 - is necessary to protect other patients.

MCQ answers

1	2	3
a T	a F	a T
b T	b F	b F
c F	c T	c T
d T	d T	d F
e F	e F	e F